



# MALL AND MOTIVATION REVISITED: A CASE OF DOCUMENT ANALYSIS

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## ABSTRACT

Considering the extensive domain and potential of Mobile Assisted Language Learning (MALL) in language teaching and learning, exerting cell phones seems inevitable. Mobile and portable devices are accounted as potentially considerable language learning aids. Uprising applicability of English learning via MALL enriches dynamicity which is not accessible through traditional methods /approaches. MALL provides unlimited access to learn English. Language practioners and designers identify the strength and potentiality of mobile-learning as a novel approach or method for English learners and have incorporated it into both usual classes and distance learning milieu. The applicability and effectiveness of MALL had been a questionable issue. This review article intends to provide a general outline of investigations focusing on MALL with reference to impact of learners' motivation. Regarding design of document analysis, this paper examines 28 MALL studies published between 2006 to 2018. As a follow-up, the findings showed that learners' level of motivation significantly impacts mobile-learning and has a positive contribution. New research horizons to MALL include, its examination from cognitive and psychological perspectives, and integration with social-media with regard to English language learning have been provided.

**KEYWORDS:** Mobile assisted language learning, motivation, technology, document analysis, english language teaching.

## INTRODUCTION:

In the recent decades, growing changes and innovative trends and methods in learning environment, process have occurred which are attributed to incremental development in communication technology. MALL as a new trend, has had a considerable applications in different fields of study such as economy, banking management, tourism, and academic projects in libraries and etc (Lakhal, Khechine, & Pascot, 2007; Hew, 2009; Dewitt & Siraj, 2010). Applicability of technology is extended to education and learning theories, and also has been affecting practioners and researchers employ these innovative technologies in the traditional classroom milieus (Naismith et al., 2004).

Although instructional aides and equipments are conspicuously developed, approaches and methods in teaching and learning maintain their traditional frame work. In recent years of educational milieus, practioners and research have become aware about deficiency of language learning methods and approaches which rely on classroom-only language learning procedures. The most considerable drawbacks of such methods and approaches are referred to as: 1) existence of a dissociative border line between instructional materials and learning procedures (de-contextualization), 2) negation or lack of real and valid interactions are based on social values (Little, 2007; Tedick & Walker, 1995). Accordingly, for the aim of promoting teaching and improving learning quality, the recent trends of English language teaching should reconsider traditional teaching methods and approaches. This integral aims, that is, addressing teaching designs, innovating novel instructional patterns are among the most important strategies toward enhancement in learning foreign languages particularly English. Therefore, to unravel these issues, researchers pay uprising attention to new and innovative instructional and interactional theories in teaching and learning English approaches (Rau, Gao, & Wu, 2008).

Approaches that are based on technology particularly mobile assisted language learning (MALL) and electronic learning are new methods in language education which have attracted upsurge attention by researchers recently (e.g., Ayati & Sarani, 2012; Bottentuit Junior, Coutinho, & Pereira, 2008; Pover & Shrestha, 2010; Rao et al., 2008; Sarani, 2011; Shohel, Mahruf, & Power, 2010). MALL as a kind of technology- based teaching aids, has been the focus of research in the context of ESL classrooms; moreover, its efficaciousness and challenges have been addressed (e.g., Siraj & Saleh, 2003; Stapa, & Izahar, 2010; Stockwell, 2008).

In educational fields, m-learning is employed to focus on impact or design studies which have the most positive perceptions and results (Wu et al., 2012), also it significantly impacts various levels of learning, educational enthusiasm, and learning centralization (Lee, Han, & Lee, 2009). Computer technology and MALL enact considerable roles in improving teaching, performance, and motivation (Rau et al., 2008). Concerning the importance of motivation in learning, findings of a survey in Taiwan (2010) showed that abatement in students' motivation was the main reason of their despair in education. Moreover, it has been demonstrated that traditional instruction at the level of high school and university has been unsuccessful, and any reformations and betterments in English language teaching (ELT) have not met effective results (Pishghadam, 2009).

By corroborating the superiority of electronic learning in educational settings,

weakness of traditional methods has become more apparent (Sarani, 2012). Traditional methods have been criticized since they have encountered several problems such as lack of attention to learners, ignoring students' differences and needs, and not considering the importance of problem solving using (Panjaburee et al., 2010). Taking into account efficaciousness of educational- multimedia environment, it can be concluded that if a multi-sensational milieu and all the required facilities for communication are provided for students, these factors would enhance their motivation in learning (Sarani & Ayati, 2014).

Telephone is one of the most effective learning devices that has specialized a wide range of research in academic setting to itself (Gharibi & Mohammadi, 2009). Self-confidence, motivation enhancement, critical thinking, autonomous learning, fast comprehension, student encouragement, interaction enrichment, creativity promotion, flexibility in learning, abatement in psychological impediments ( phobia, embarrassment), and creation of more interest in learning, all are the benefits of using MALL (e.g., Luisa Vinci & Cucchi, 2007; Mahboobi et al., 2011; Rau et al., 2008; Sarani, 2012; Smith, Whiteley, & Smith, 1999; Vinager, 2008). Although, plenty of research has been conducted in educational fields, scant studies have been taken into consideration its effect from learners' even motivational perspectives (Hashim, & Rashid, 2014).

By and large, from the aggregation of importance in fostering motivation and designing learning strategies, it can be inferred that if traditional approaches in teaching have a forward step toward technology and MALL, the novel strategies would provide learners with higher level of motivation (Rau et al., 2008). From this respect, the present review study intends to examine 28 selected MALL and motivation (studies in English language learning).

## REVIEW OF THE RELATED LITERATURE:

### Mobile Assisted Learning Language (MALL):

MALL is an approach in learning which assists learning by employing a handheld mobile device (Chinnery, 2006; Kukulska-Hulme & Shield, 2008). According to Shield and Kukulska, 2008 MALL is a kind of teaching aids or approach which has its traces of applicability through use of handheld mobile devices. Historically speaking, applicability of MALL has its origin in 1990s. Twarog and Preszlenyi Pinter used telephone to enrich and give feedback to those language learners to whom direct instruction was not available. In approximation to the emergence of MALL, Green, Collier, and Evans (2001) held English courses for students from Hawaii and Tonga through telephone and computer.

During 1980s and 1990s, use of MALL was pertinent to general learning, but since 2000 its applicability encompassed a broader scope of skills and learning process (speaking, various class activities, listening, & assessment), and in 2000 it was used for teaching English conversations to students in South Korea (Dickey, 2000, & Brown, 2001).

One step higher, an innovative English course for conversation was developed via MALL (as a management system) in which it enacted a facilitative role in learning English speaking (Thornton, Houser, 2005). Emphasis on the importance of creating a learning environment that focuses on learners along using mobile techniques for instruction had been a noticeable issue for researchers

(Beatty, 2003; Doughty & Long, 2003). Belanger (2005) utilized a more advanced language course via MALL, in which used students' listening and their speaking abilities for recording their voices. In 2005, an advanced type of MALL was used in an Irish learning course for the aim of assessment. In fact, development of MALL during 1980s has aroused from learners' needs in a type of learning which was not available at the ripening time of instruction and classroom.

From one hand, in academic fields ample studies have been examined the impact of MALL on general learning (e.g., Chinney, 2006; Gromik, 2012; Leow, Yahaya, & Samsudin, 2014; 2010; Sharples, Taylor, & Vavoula, 2007). Results of meta-analysis revealed the effective role of MALL on second and foreign language learning. From another hand, different studies relevant to MALL are not only limited to examine learning, (e.g., Panjaburee et al., 2010; Sarani & Ayati, 2014; Rau et al., 2008) but also educational/cognitive aspects (Bordbar, 2016), motivation (Sarani, Ayati, & Naderi, 2011).

#### Models in MALL:

Different models for m-learning were developed across time (since 2002- 2012) under various categories. As reported by Hsu and Ching (2015), there are five classification namely, pedagogies and learning environment design, platform/system design, technology acceptance, psychological construct, and Evaluative model. In the following section, two m-learning models as instances are provided.

#### Mobility Hierarchy Model (MHM):

One of the primary models in MALL is known as Mobility Hierarchy Model, developed by Gay, Rieger, and Bennington (2002). It is a four layered model and it encourages mobile use in educational settings (Figure 1).

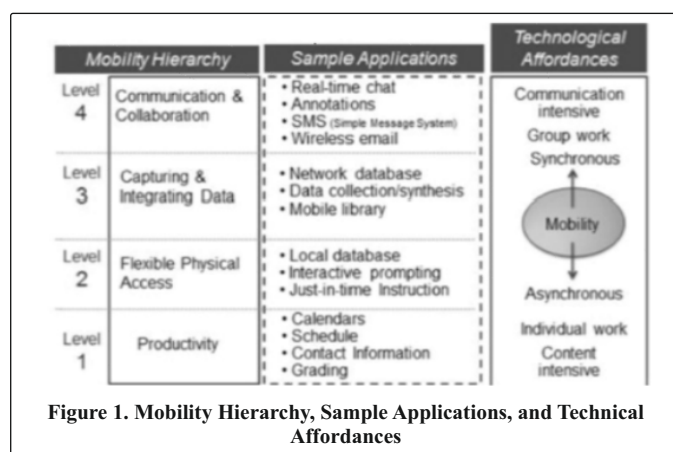


Figure 1. Mobility Hierarchy, Sample Applications, and Technical Affordances

According to Figure 1, the first level (productivity) is content intensive and it provides all the required content. As m-learning goes toward the last two levels, its content intensive nature matures to collaborative and communicative dimension. This model has its advantage on the basis of making "learner-centered learning which operates at two distinct levels. In "individual level", students use calendars, schedules, and content information to promote their organizational skills. Furthermore, these sources of information help them to become self-directed; whereas, at the collaborative and communicative levels real time chats, SMS (simple message system) support them to get involved in commutation.

#### FRAME Model (Framework for Rational Analysis of Mobile Education):

Koole's mobile learning model is known as FRAME model which has an optimal degree of appropriateness for the aim of language learning (2009). This model is a blend of three distinct dimensions, including: learner (ability/ competence of human learning), social dimension (social interaction), and device (mobile technology) (Figure 2). The applicability scope of this model includes both formal and informal pedagogical contexts.

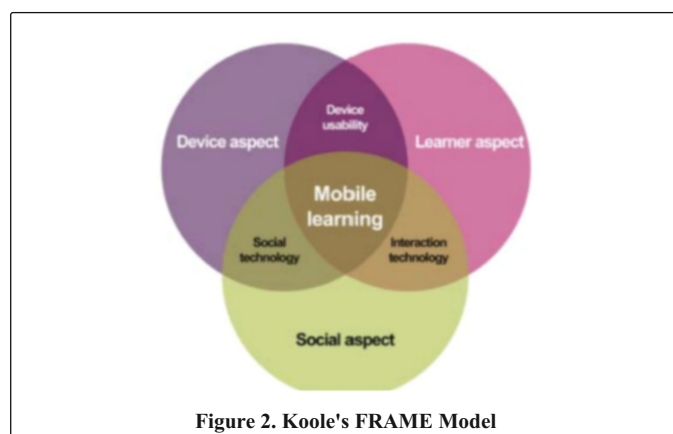


Figure 2. Koole's FRAME Model

#### MALL and motivation:

##### Method:

In this study, each article was analyzed through documentary (document) analysis. Document analysis is a type of qualitative research or review process in which content of articles (documents) are reviewed systematically and objectively to assess evaluation conspectus (Bauer, 2003). In this kind of a research, a researcher's revision is done by giving sense to appraisal subject; moreover, its significance becomes more conspicuous in its assistance to contextualize an individual's research within its field of interest (Bowen, 2009). As a research technique, document analysis is used to show particular features of the studied data through the numerical representation (Karasar, 2002).

The literature review is restricted to those articles which relevant to MALL and motivation in learning English (also skills and sub-skills) published in the last 13 years from three data bases (Science Direct, Civilica, Ulbakim). Totally 28 articles were collected from various Iranian, a Turkish, and ELT journals such as Quarterly Journal of Research and Planning in Higher Education, Journal of Knowledge and Research in Education, Journal of Computer Assisted Learning, Journal of Computers and Education, Journal of Management and Planning in Educational Management, Computers and Society, British Journal of Educational Technology, Turkish Online Journal of Educational Technology, Journal of Technology of Education, Research in Curriculum Planning, Educational Administration Research Quarterly, Journal of Educational Research, Computer Assisted Language Learning To determine the structure of the study issues, a categorization was performed based on the goal of the study. In the process of categorization, the basis by We et al (2008) was implemented. These include: (A) appraisal of the efficaciousness of MALL, (B) accompanied cognitive variables in the learning process, (C) milieu was designed for mobile-learning (D) impacts of learners' characteristics in the process of mobile-learning. Although one of the criteria was taken a side, since there is no study based on the criteria. Distribution of the study issues by these classifications are represented in Table 1.

Table 1. Distribution of Studies Based on Purpose

Purposes	Science Direct	Civilica	Ulbakim
C <sub>1</sub> . Appraisal of the efficaciousness of MALL	21	6	1
C <sub>2</sub> . Accompanied cognitive variables	8	4	1
C <sub>3</sub> . Milieu was designed for MALL	21	6	1
C <sub>4</sub> . Impacts of learners' characteristics on MALL	21	6	1

As it is shown in Table 1, purposes of the majority of studies were to appraise the efficaciousness of learning environment based on MALL and examined cognitive variables. However, few studies were allocated to consider cognitive variables with regard to MALL.

#### Distribution of Research Methodologies in studies:

In Table 1, the first criterion of categorization (purpose) is represented. The other criterion for classifying the studies was the types of research methods. In a study, Kucuk et al. (2013) demonstrated that studies have been classified into three groups of qualitative, quantitative, and mixed method. The distribution of these studies within these groups is summarized in Table 2.

Table 2: Distribution of Studies Based on Research Methodology

Research Methodology	Science Direct	Civilica	Ulbakim
Qualitative	13		
Quantitative	5	5	
Mixed	3	1	1

After analysis, as it is seen the majority of studies were carried out in a form of review studies, however, out of 28 studies, 13 studies were conducted quantitatively.

#### Distribution of Skills and Sub-Skills in Studies:

The integral aim of this study was to examine the MALL and motivation in educational settings generally and field of English language teaching (ELT) in specific, from this respect only EFL learners was centralized. The collected articles in this study were different from components of learning. Distribution of studies on the basis of which skill(s) and sub-skills is presented in Table 3.

Table 3. Distribution of Studies Based on Skills and Sub-Skills

Type of Skill	Science Direct	Civilica	Ulbakim
Listening	3		
Speaking	1		
Vocabulary	4	3	1

As the table shows, among three data bases, Science Direct had the most research regarding listening, speaking and vocabulary. Although Ulbakim had the least number of article in this regard. Civilica as a Persian data base, focused on only vocabulary learning through MALL.

### 2.3.3. Distribution of Skills and Sub-Skills in Studies:

The collected studies have been analyzed and categorized on the basis of educational/learning outcomes separately in terms of positive, negative, and neutral. Distribution of studies in the scope of these categories is presented in Table 4.

**Table 4. Distribution of Studies Based on Learning Outcomes**

Learning outcomes	Science Direct	Civilica	Ulbakim
Positive	21	6	1
Negative			
Neutral			

After analysis of the table and reviewing the whole 28 articles, as it is shown all the articles in the three data bases had a positive relationship with learning outcomes.

From most researchers' perspectives the concept of "motivation" is one of the most vital elements in learning process (Dorneyei, 2000, 2001; Spolskey, 2000). Although motivation proves to be an abstruse term, since in its depth different numbers of disciplines make it difficult to draw reasonable apprehensions about its various facets. In general, the complexity of motivation resides in its attempt to clarify one's behavior and way of acting, which might not be regarded as a panacea approach (Dorneyei, 2000). The applicability of motivation encompasses various fields of study, namely educational and cognitive psychology, social psychology, and sociolinguistics have something to do with understanding motivation in formal educational contexts (Dorneyei, 2001).

Teachers' awareness of students' motivation and its relationship with teaching provides a framework by which teachers can choose effective teaching methods. Taking into account the key concept of "motivation" in promoting teaching process, it can also enacts an effective role in facilitating learning process. Concerning the objective of this review study, MALL as a type of learning plays an important role.

Cheng and Chung (2007) in an examination of learning English vocabulary through MALL found that m-learning enacted an effective role both in enhancing learners' level of motivation and assessing their performances in vocabulary learning simultaneously, in comparison to usual style of learning.

In 2007, Jacob and Issac conducted a study to examine the effect of m-learning on students of higher education. Interestingly, they found that what made them feel more motivated was that m-learning facilitated ease, flexibility, and promotion in communication. Second, it was found that m-learning did not affect learning and level of motivation. The authors asserted that type and range of materials in m-learning affected its advantages and disadvantages.

Regarding the importance of MALL on motivation, Rau et al. (2008) concluded that m-learning led to a better teacher-learner interaction without having a mediatory role, and also enhanced students' motivation and accordingly, their performances in doing tests.

In a study aimed at comparing the effect of learning via printed sources and m-learning, Lu (2008) found that besides higher effectiveness of m-learning on students' learning, Learning via SMS led to higher marks in assessment than the printed papers. Similar to findings of Cheng and Chung's study (2007), Cavus and Ibrahim (2009) found that m-learning led to higher level of motivation and performance in learners.

In 2010, Baki and Akdemir conducted a study to examine the effect of vocabulary learning via flash cards and m-learning. The results showed that vocabulary learning through m-learning was more effective. Moreover, m-learning enhanced learners' motivation in vocabulary learning than before.

Hwang and Fang Chang (2011) examined how m-learning affected students' learning. The results revealed that using m-learning led to learners' promotion in their attitudes, desires, and levels of motivation. In line with this study, Sarani (2012) conducted a study aimed at interrogating the impact of MALL on students' motivation in an English course. Based on results, they concluded that those groups whose learning accompanied by m-learning enjoyed higher levels of motivation.

Several studies investigating motivation have been carried out on MALL. Ayati and Sarani (2012) concluded that m-learning enhanced students' levels of motivation, desire, and positive attitudes toward learning English. Regarding the significance of MALL, Mahboobi et al. (2011) conducted a study to interrogate the impact of information technology and communication positively and significantly affected students' self autonomy, academic performance, and students' creativity. The impact of MALL on learners' motivation has been examined from a

different aspect, Rezaiee Rad, Nadri, Mohamadi Etergoleh (2013), conducted a study aimed at investigating ADDIE (Analysis, Design, Development, Implementation, Evaluation) with emphasizing mobile learning on learners' of higher education motivation, self- concept and also learners' educational achievements. The results of teaching with ADDIE through MALL, completing Hemans achievement motivation test, and self-conception questionnaire between control and experimental group, revealed that having implemented this method by sending SMS, experimental group were more enthusiastic toward learning, thus, felt more motivated than receiving the same method in usual/traditional and inside-classroom teaching.

Similarly, regarding foreign language learning, Rezaiee Rad and Fallah (2014) examined the impact of MALL on motivation, academic promotion, and self-awareness in students of higher education. The results of co-variance revealed that using cell phone by experimental group led to higher average rate. Accordingly, enjoying better performances in learning was a result of higher level of motivation. Su and Cheng (2014) investigated how a gamified learning approach impacts elementary students' learning, motivation and educational outcomes in a mobile-learning context. Based on the results of pre- and post- test, the researchers concluded that students' performances were better in a mobile- learning environment than receiving traditional educational instructions and facilities. The higher level of motivation helped students to decide better regarding their educational issues.

Setting a link between MALL and motivation, Jafarian et al.(2015) found the positive effect of mobile learning on learners' motivation through their skills in problem solving. Based on the analysis of variance, the researchers implicitly found that power in problem solving made learners to control behavior and emotions during learning more than earlier, helped them to gain more confidence in learning. Accordingly, learners were much more motivated.

In a recent study, Bordbari (2016) examined the effect of teaching through MALL by considering psychological and educational aspects on students of higher education in Payam-Noor University. She concluded that those students whose teaching accompanied by MALL enjoyed higher levels of motivation to progress, had better performances in tests, were more autonomous.

Recently, Nikou and Economides (2018) carried out a study in which self determination theory of motivation and several mobile-based micro-learning activities were used to examine high school students' performances and motivation. Interestingly, the results showed that MALL led to a better performance which was based on factual knowledge.

## RESULTS AND DISCUSSION:

Learners' motivation as one of the golden keys in learning has been a matter of concern for language practioners and researchers (Cheng & Dorneyei, 2007). In second language learning, Dorneyei and Otto (1998) defined motivation as "the dynamically changing cumulative arousal in a person that initiates, directs, coordinates, amplifies, terminates, and evaluates the cognitive and motor processes where by initial wishes and desires are selected, prioritized, operationalized (successfully or unsuccessfully) acted out" (p.65).

Core of this definition encompasses a key point; that is, various factors are involved with learners' desire in L2 learning. Noels, Clement, and Polletier (1999) demonstrated that "endogenous" (i.e., internal or inner interest) and "exogenous" (i.e., external to one's personality) are two factors that make learners be distinguished regarding level of motivation. Instances of exogenous factors are learners' needs, language requirements for education, socio-cultural milieu).

In fact, as demonstrated by Noels et al. (1999), exogenous factors deal with concrete advantages which are attached to an activity. To shed more light on this assertion, Rau et al. (2008) stated that teaching and learning utilize novel methods or approaches like MALL that are being utilized in educational settings have priority and superiority rather traditional one; that is, novel methods/approaches have more capacity to adapt themselves with learners' needs, learning styles in specific and overall class environment in general. In line with this justification, Knorzer, Brunken, and Park (2016) found learners' behavioral features influence multimedia learning (computer and mobile). One's personality traits are considered as an endogenous factor which is a kind of measurement to make motivated individuals from unmotivated. Based on Cognitive-Affective Theory, Knorzer et al (2016) asserted learners with positive emotions felt more motivated and accordingly enjoyed higher performances in multimedia learning. MALL is not a distinctive teaching method or approach per se; however, it lends itself to be applied with the existing methods and approaches. In this regard, Rezaiee Rad et al. (2013) concluded that ADDIE as a teaching method best adjusts itself with mobile learning contexts and learners' needs, besides considering achievement of academic outcomes.

Furthermore, as mentioned in the literature, all research in the time-scoping of this study was consistent in the positive correlation of MALL and motivation. Cheng and Chung (2007) asserted that the nature of "flexibility" in m-learning, distinguishes it among other methods and approaches.

Besides the impact of MALL on motivation, it addresses other pedagogical



implications such as it positively influences interaction between learners (Dias, 2002), enhances learners' communicative competence and level of motivation toward learning (Cooney & Keogh, 2007), strengthens levels of attitudes and motivation in learners (Wu et al., 2012)

In line with corroborating the findings, Power and Shrestha (2009) demonstrated that such novel approaches/ methods results in making teacher-centered classroom to a learner-centered one and also, this learner-centeredness links MALL to cultural theories (which these theories support active and autonomous learning). To make the bond between MALL and motivation, Rahimi and Hosseini (2011) concluded that technology enacts as an accelerator in enhancing learning motivation. In line with corroborating the previous findings, it can be said that mobile-based micro-learning which applies mobile learning and mobile-learning can strongly justify improvement in students' performances. Having categorized activities into small/short term learning units and employed authentic/ real life teaching tools, this approach provides enough motivation for students to have higher performances (Nikou and Economides, 2018)

A growing body of research and investigations are debating regarding the extensive use of MALL and its influence on learning (Pattern, Sanches, & Tangney, 2006). Along with this increasing growth, Sandberg, Maris, and Geus (2011) have asserted that the ubiquity of MALL provide opportunity for learners to learn at any time or place. Having benefited to learning, MALL fosters co-operation and accordingly interaction between pairs (groups) and individuals (Joseph & Uther, 2009; Uzunboylu & Ozdamli, 2011), and also fosters learners' autonomy (Benson, 2001). MALL which is being employed for academic aims shows a great inclination toward design studies and contributory outcomes in learning and teaching (Wu et al., 2012). It was reported that disciplinary fields like language studies and linguistics teaching methods and approaches are being frequently integrated with MALL (Bozdogan, 2015).

As a new pedagogical trend, MALL enacts a mediatory role between outside and inside classroom; that is, it connects teachers and students from inside the classroom to the real world (Keegan, 2003). Having enjoyed a rich class milieu, MALL can assist teachers to provide such environment for learners. Nevertheless, considering at how fast new products in mobile are going forward, with high-advanced mobile usages and functions available these days, some limitations of mobile devices (in nature they are technical) can be a concern. Moreover, using mobile technologies in learning is sweeping from small-scales or pilots into mixed studies and projects (Traxler, 2010), in line with this justification, more examinations are recommended to be conducted in larger scales.

In the scope of the analyzed studies between 2006-2018, the focus of most studies were on the efficaciousness of MALL in learning and motivation development. Considering the classification of Wu et al. (2008), examining cognitive variables had gained the least attention; this scant attention can suggest researchers to conduct more examinations to make the literature on MALL- motivation richer. In line with analysis of the 28 studies, further research is recommended to researchers to be conducted in the Iranian context, since among the three data bases on the current study most of the ELT articles published in the foreign journals used qualitative and mixed method research methodologies more than quantitative method. It can be inferred that MALL is a research variable which requires more observation than just filling in questionnaires or statistically examined. In other words, mixed method research is an appropriate method to examine MALL in learning environment. More on the analysis of articles, it was found that foreign journals cover sub-skills of listening, vocabulary and to a lesser extent speaking, though in the Iranian and Turkish data bases researchers had their focus of studies on just vocabulary.

Moreover, in Krashen's viewpoints (2008), having anticipation about the future of politics and technology by human beings is blurred; however, it seems that MALL may be as applicable as Computer Assisted Language Learning (CALL). New additions are suggested to consider the probable effects of: 1) learners' demographic variables (age, gender, level of proficiency & ethnicity), also, 2) cognitive, educational, and psychological factors, and 3) integration of MALL with social-media on MALL. Moreover, further research regarding this subject is suggested to examine how implications in cognitive and socio-cognitive approaches and methods are being integrated with technology-based learning.

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